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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/066,431 | 01/31/2002 | Yonghe Liu | TI-33527 | 5100 |

23494 7590 12/28/2005

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| EXAMINER |
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WILSON, ROBERT W

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| ART UNIT | PAPER NUMBER |
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2661

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/066,431 | Applicant(s) LIU ET AL. | |
| | Examiner Robert W. Wilson | Art Unit 2661 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-29 and 31-40 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 1-21 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Specification

1. The abstract of the disclosure is objected to because it contains elemental numbers which refer to a figure without specifying a figure. Please delete the elemental numbers. Correction is required. See MPEP § 608.01(b).

Claim Objections

2. Claims 1-21 & 30 are objected to because of the following informalities:

Referring to claim 1, the applicant inconsistently used “backoff counter” as “backoff counter” and as “a single backoff”. The examiner recommends that the applicant amend the claim to indicate whether they are the same or different backoff counters.

Referring to claims 5-21 the applicant inconsistently utilized “back off time” for a first traffic category” and “backoff time” in a hardware “backoff timer”. The examiner recommends that the applicant amend the claim to indicate that one of the backoff times is new whereas the other is an existing value in the hardware.

Referring to claim 30, “b5” is a typographical error. Please delete the typographical error.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benveniste (Patent Pub. No.: US2002/0154653)

Referring to claim 1, Benveniste teaches: Figures 2 shows a method for contention for access to a communication medium to transmit a message of a high urgency class or first traffic category in a system implementing a plurality of backoff counters. High urgency class packets are assigned queue into Data Buffer which is associated with BKOFF TIMER or hardware backoff counter (determining) and the next step is to follow through with a backoff procedure. In the event that the BKOFF TIMER or backoff counter is busy then the timer is decremented which is associated with high urgency traffic of first traffic category. Since it is unclear to the examiner whether the hardware backoff counters are implemented in a single hardware backoff counter or multiple hardware backoff counters. The values of the hardware backoff timer associated with high urgency class packets are compared to the hardware backoff timer of medium urgency packets or second traffic category. Based upon the determination of whether a backoff counter value is zero or comparing the backoff procedure process.

Benveniste does not expressly call for: backoff counter is idle.

Benveniste teaches Fig 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the high urgency class packets are assigned to a data buffer associated with a BKOFF TIMER that is idle in order for the invention to work.

Allowable Subject Matter

5. Claims 22-29 & 31-40 are allowed.

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The closest prior art is Young (U.S. Patent No.: 6,965,942). Young teaches method for implementing a backoff counter by first determining the state of the hardware backoff counter and if the hardware backoff counter is in the process of counting down or performing a procedure determined the state of the medium and if the medium is idle then decrementing a value in the hardware backoff counter and if the value is equal to zero then allowing transmission to occur and if the communications medium is busy, then updating a value in each backoff counter per col. 7 lines 11-47.

The following is an Examiner's statement of reasons for allowance:

Claims 22-29 & 31-34 are considered allowable since when reading the claims in light of the specification, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in the independent claims including selecting a backoff counter with a smallest value; moving the selected backoff counter to the hardware backoff counter; and initiating a new backoff procedure with the hardware backoff counter” as specified in claim 22

The closest prior art is Benveniste (Patent Pub. No.: US2002/0154653). Benveniste teaches : a circuit for implementing a plurality of backoff counters. The BKOFF TIMER or hardware decrements backoff time when the network is idle. The BKOFF TIMER inherently has memory. BACKOFF RANGE is processor coupled to the hardware backoff timer which provides an initial backoff timer value. .

The following is an Examiner's statement of reasons for allowance:

Claims 35-40 are considered allowable since when reading the claims in light of the specification, none of the references of record alone or in combination disclose or suggest the

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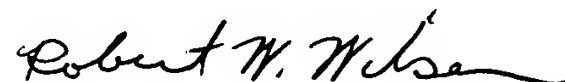
combination of limitations specified in the independent claims including the structure to perform “a generate a new virtual backoff unit coupled to the initial transmit hardware enqueue unit and memory, the generate new virtual backoff unit containing circuitry to generate virtual backoff times and to place the transmission request forward to it by the initial transmit hardware enqueue unit onto a queue” as claimed in claim 35 and 38 respectively.

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2661



BOB PHUNKUL
PRIMARY EXAMINER

RWW
12/22/05